

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

Claim 1 (Previously presented) A job processing system comprising a terminal equipment for issuing a job request by handling a plurality of documents as one job, and a job scheduling device which sequentially processes jobs by storing the jobs, received from the terminal equipment through a network, in a queue and sending a job execution section a processing request relating to a document specified by the job stored in the queue,

said terminal equipment comprising:

attribute information adding means for adding information which specifies a job output method to a job request as attribute information of the job, and

said job scheduling device comprising:

attribute information setting means for acquiring attribute information included in the received job and sets the attribute information to information which specifies a job and a document;

a queue for storing, as a job, a group of items of the information which specify a job and a document, the information including a job copy number count which specifies a number of copies of the current job; and

output result control means which, upon reference to the information items which specify a job and a document with respect to the job stored in the queue, controls the processing request issued to the job execution section in such a way that the specified

number of copies of the job are output using the information which specifies a job output method.

Claim 2 (Previously presented) A job processing system comprising a terminal equipment for issuing a job request by handling a plurality of documents as one job, and a job scheduling device which sequentially processes jobs by storing the jobs, received from the terminal equipment through a network, in a queue and sending a job execution section a processing request relating to a document specified by the job stored in the queue,

said terminal equipment comprising:

attribute information adding means for adding information relating to the number of copies of the job and information relating to a job output result to the job request as job attribute information, and

said job scheduling device comprising:

attribute information setting means for acquiring attribute information included in the received job and sets the attribute information to information which specifies a job and a document;

a queue for storing, as a job, a group of items of the information which specify a job and a document, the information including a job copy number count which specifies a number of copies of the current job; and

output result control means which, upon reference to the information for specifying a job and a document with respect to the job stored in the queue, controls the processing request issued to the job execution section in such a way that the specified number of copies of the job are only output in a collated manner if collation processing

is specified in the information relating to a job output result using the information which specifies a job and a document, or in such a way that the specified number of copies of the job are only output in an uncollated manner if uncollation processing is specified in the information relating to the job output result using the information which specifies a job and a document.

Claim 3 (Previously presented) A job processing system comprising a terminal equipment for issuing a processing request by handling a plurality of documents as one job, a job execution section for printing the documents, and a job scheduling device which accepts a document input from the terminal equipment through a network and issues a processing request relating to that document to the job execution section,

said terminal equipment comprising:

control information specifying means for specifying a processing start wait for a leading document among the plurality of documents, and

said job scheduling device comprising:

preparation means for preparing information which specifies a received document;

queuing means for storing the prepared information which specifies the document by associating the information on a job-by-job basis;

control information setting means which, if a processing start wait is specified for the leading document among a plurality of received documents, sets the processing start wait to information for specifying this leading document; and

control state setting means which, if the processing start wait is set to information which specifies the leading document of the job stored in said queuing means, renders that job in a processing start wait state,

wherein said job scheduling device sequentially retrieves jobs stored in said queuing means when the job execution section becomes enabled to accept processing, issues a processing request for a corresponding document when there is information specifying a document to which a processing request can be issued, and when a job is placed in the processing start wait state, prevents the issue of processing requests with respect to a document for that job and documents for subsequent jobs until that job is released from the processing start wait state by a user's instruction or a timeout.

Claim 4 (Previously presented) A job processing system comprising a terminal equipment for issuing a processing request by handling a plurality of documents as one job, a job execution section for printing the documents, and a job scheduling device which accepts a document input from the terminal equipment through a network and issues a processing request relating to that document to the job execution section,

said terminal equipment comprising:

control information specifying means for specifying a processing completion wait for a leading document among the plurality of documents, and

said job scheduling device comprising:

preparation means for preparing information which specifies a received document;

queuing means for storing the prepared information which specifies the document by associating the information on a job-by-job basis;

control information setting means which, if a processing completion wait is specified for the leading document among a plurality of received documents, sets the processing completion wait to information for specifying this leading document; and

control state setting means which, if the processing completion wait is set to information which specifies the leading document of the job stored in said queuing means, renders that job in a processing completion wait state,

wherein said job scheduling device sequentially retrieves jobs stored in said queuing means when the job execution section becomes enabled to accept processing, issues a processing request for a corresponding document when there is information specifying a document to which a processing request can be issued, and when a job is placed in the processing completion wait state, prevents the issue of processing requests with respect to a document for that job and documents for subsequent jobs until that job is released from the processing completion wait state by a user's instruction or a timeout.

Claim 5 (Previously presented) A job processing system comprising a terminal equipment for issuing a processing request by handling a plurality of documents as one job, a job execution section for printing the documents, and a job scheduling device which accepts a document input from the terminal equipment through a network and issues a processing request relating to that document to the job execution section,

said terminal equipment comprising:

control information setting means for specifying a password input wait for a leading document among the plurality of documents, and

said job scheduling device comprising:

preparation means for preparing information which specifies a received document;

queuing means for storing the information which specifies the document by associating the information on a job-by-job basis;

control information setting means which, if a password input wait is set for the leading document among a plurality of received documents, sets the password input wait to information which specifies that leading document; and

control state setting means which, if the password input wait state is set to information which specifies the leading document of the job stored in the queuing means, renders that job in a password input wait state,

wherein said job scheduling device sequentially retrieves jobs stored in said queuing means when the job execution section becomes enabled to accept processing, issues a processing request for a corresponding document when there is information specifying a document to which a processing request can be issued, and when a job is placed in the password input wait state, prevents the issue of processing requests with respect to a document of that job and documents of subsequent jobs until that job is released from the password input wait state by a user's instruction or a timeout.

Claim 6 (Previously presented) A job processing system comprising a terminal equipment for issuing a processing request, and a job scheduling device which sequentially processes jobs by storing the jobs received from the terminal equipment in a queue and issuing a processing request, relating to a document specified by the job stored in the queue, to a job execution section,

said terminal equipment comprising:

attribute information adding means for adding information relating to job wait control and message information relating to the wait control to the job request as attribute information, and

said scheduling device comprising:

job information preparing means for preparing job information which specifies a received job;

attribute information setting means for setting attribute information included in the received job in the job information;

a queue for storing the prepared job information in order;

control state setting means which, if wait control is set to the job information stored in said queue, renders a job associated with that job information in a wait control state when processing of that job is started or completed; and

message information informing means which, when the job enters the wait control state, informs said terminal equipment of message information set with respect to that job.

Claim 7 (Cancelled).

Claim 8 (Cancelled).

Claim 9 (Cancelled).

Claim 10 (Cancelled).

Claim 11 (Cancelled).

Claim 12 (Cancelled).

Claim 13 (Cancelled).

Claim 14 (Cancelled).

Claim 15 (Withdrawn) A job scheduling device which sequentially stores jobs, for which processing requests were received from terminals, in a queue and sequentially processes the jobs held in the queue using a job execution section, said job scheduling device comprising:

a plurality of queues provided corresponding to a status of a sequential job process;

scheduling means for scheduling the jobs using the plurality of queues, wherein each job has associated job information which includes job status information; and

recovery means for recovering the status of each of the jobs being held in the plurality of queues, at the time of recovery from a failure, if any failure occurred while the jobs are being scheduled by said scheduling means, wherein the status recovered by the recovery means is the status immediately before the occurrence of the failure and wherein if the status of a [I]job is changed due to the failure, the status recovered is a changed status and the job information including the job status information associated with the job having the changed status is updated to reflect the changed status.

Claim 16 (Currently Amended) A job scheduling device comprising:

a job scheduling section that prepares job information of each print job, wherein each print job includes print data and attribute data, each job information includes a current state of the print job and a previous state of the print job, and the print jobs are received from terminals connected to the job scheduling device;

a queue management section that stores ~~for storing~~, in a one of a plurality of queues ~~queue~~, the job information of each print jobs which ~~job~~ in accordance with the

current state of the print job; and include print data and attribute information and for
which processing requests were received from terminals, and for

a job execution control section that sequentially printing outputs the print jobs
held in the queues queue based on the attribute information of the print jobs, wherein:
using a job execution section, said job scheduling device is configured to:

maintain a plurality of queues provided corresponding to print job states;

schedule the print jobs using the plurality of queues;

the job scheduling section schedules the print jobs using the plurality of queues,

and

upon receipt of an instruction for modifying attribute information of one of the
print jobs, the job scheduling section determines whether or not it is allowed to modify
the attribute information of the one of the print jobs, based on (i) the queue that stores
the job information of the one of the print jobs, (ii) the current state of the one of the print
jobs, and (iii) the previous state of the one of the print jobs only when a print job can be
changed at the time that an instruction for modifying the attribute information of the print
job is received, and when the attribute information is determined to acceptable to the job
scheduling device; and

wherein the attribute information is at least one of paper size, tray number, and
the availability of double-sided printing.

Claim 17 (Currently Amended) The job scheduling device of claim 16 ~~is further~~
~~configured to modify~~, wherein the job scheduling section modifies the attribute
information of the print job when the attribute information of the print job can be
modified.

Claim 18 (Currently Amended) The job scheduling device of claim 16 ~~is further configured to modify~~, wherein the job scheduling section modifies the attribute information of the print job when the instruction is free from errors.

Claim 19 (Cancelled).

Claim 20 (Currently Amended) The job scheduling device of claim 18 ~~is further configured to determine~~, wherein the job scheduling section determines that the instruction has an error when the instruction includes an attribute that is not supported by the job scheduling device.

Claim 21 (Cancelled).

Claim 22 (Cancelled).

Claim 23 (Cancelled).

Claim 24 (Cancelled).

Claim 25 (Cancelled).

Claim 26 (New) The job scheduling device of claim 16, wherein upon receipt of the instruction for modifying the attribute information of the one of the print jobs, the job scheduling section modifies the attribute information of the one of the print jobs only when the one of the print jobs can be changed at the time when the instruction is received, and when the job scheduling section determines that the attribute information of the one of the print jobs is acceptable to the job scheduling device.

Claim 27 (New) The job scheduling device of claim 16, wherein the attribute information of each print job includes at least one of paper size, tray number and the availability of double-sided printing.

Claim 28 (New) The job scheduling device of claim 16, wherein when the previous state of the one of the print jobs indicates that the one of the print jobs was processed, the job scheduling section does not permit to modify the attribute information of the one of the print jobs.

Claim 29 (New) The job scheduling device of claim 16, wherein:
the plurality of queues include a hold queue, and
when the job information of the one of the print jobs is stored in the hold queue, the job scheduling section modifies the attribute information of the one of the print jobs.

Claim 30 (New) The job scheduling device of claim 29, wherein:
the plurality of queues further include a pause queue and a printer queue, and
when the job information of the one of the print jobs is stored in any of the pause queue and the printer queue and when the previous state of the one of the print jobs indicates a state other than the one of the print jobs was processed, the job scheduling section modifies the attribute information of the one of the print jobs.

Claim 31 (New) The job scheduling device of claim 16, wherein:
the plurality of queues include a hold queue, a pause queue and a printer queue,
and
when the job information of the one of the print jobs is stored in a queue other than the hold queue, the pause queue and the printer queue, the job scheduling section does not permit to modify the attribute information of the one of the job information.